



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/327,887	10/24/94	KIM	S-9983,3US01

DIM1/0926

MICHAEL D SCHUMANN  
MERCHANT GOULD SMITH EDELL WELTER  
& SCHMIDT 3100 NORWEST CENTER  
90 SOUTH SEVENTH STREET  
MINNEAPOLIS MN 55402-4131

EXAMINER	
ART UNIT	PAPER NUMBER
1107	22

DATE MAILED:

09/26/96

Below is a communication from the EXAMINER in charge of this application

COMMISSIONER OF PATENTS AND TRADEMARKS

#### ADVISORY ACTION

☒ THE PERIOD FOR RESPONSE:

- a) ☐ is extended to run 5 months or continues to run \_\_\_\_\_ from the date of the final rejection
- b) ☐ expires three months from the date of the final rejection or as of the mailing date of this Advisory Action, whichever is later. In no event however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

- ☐ Appellant's Brief is due in accordance with 37 CFR 1.192(a).
- ☒ Applicant's response to the final rejection, filed 9/4/96 has been considered with the following effect, but it is not deemed to place the application in condition for allowance:

1. ☐ The proposed amendments to the claim and/or specification will not be entered and the final rejection stands because:
- ☐ There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.
  - ☐ They raise new issues that would require further consideration and/or search. (See Note).
  - ☐ They raise the issue of new matter. (See Note).
  - ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.
  - ☐ They present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE:

2. ☐ Newly proposed or amended claims \_\_\_\_\_ would be allowed if submitted in a separately filed amendment cancelling the non-allowable claims.
3. ☐ Upon the filing an appeal, the proposed amendment ☐ will be entered ☐ will not be entered and the status of the claims will be as follows:

Claims allowed: \_\_\_\_\_  
Claims objected to: \_\_\_\_\_  
Claims rejected: \_\_\_\_\_

However;

- ☐ Applicant's response has overcome the following rejection(s): \_\_\_\_\_

4. ☒ The affidavit, exhibit or request for reconsideration has been considered but does not overcome the rejection because see attached
5. ☐ The affidavit or exhibit will not be considered because applicant has not shown good and sufficient reasons why it was not earlier presented.

- ☐ The proposed drawing correction ☐ has ☐ has not been approved by the examiner.
- ☐ Other

Art Unit: 1107

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's arguments filed 9/4/96 have been fully considered but they are not persuasive.

Applicant argues (page 2) that Gutierrez discloses a four step process which requires the deposition of a seed material instead of a two step process.

While the embodiment in Gutierrez of Figures 1-6 does display the deposition of a seed layer material, the embodiment of Figures 7 and 8 does not require the deposition of a seed material since the silicon surface (114 and 116) acts a seed for the first plug (226 and 228) deposition (col 5, lines 11-16).

Applicant argues (page 3) that the Gutierrez hole filling process is not one step since the initial reaction slows and stops. The examiner admits that the process of Gutierrez requires that the deposition gas be changed during the deposition. However, the instantly claimed invention only requires that the holes be filled entirely with a metal. That limitation is met by the process of Gutierrez.

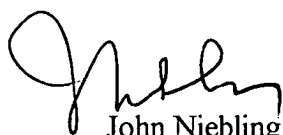
Applicant argues (page 4) that the Gutierrez process disadvantageously causes silicon to be consumed during the tungsten deposition. However, the claimed invention does not preclude silicon consumption and Gutierrez teaches making a functional device.

Art Unit: 1107


Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thomas Bilodeau whose telephone number is (703) 308-1090. The examiner can normally be reached on Monday through Friday from 6:30 AM-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on (703) 308-3325. The fax numbers for this group are (703)305-3599 and (703)305-3600.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0661.



John Niebling  
Supervisory Primary Examiner  
Art Unit 1107

  
Thomas Bilodeau  
September 18, 1996